Complete Summary

GUIDELINE TITLE

Prevention of secondary disease: immunizations.

BIBLIOGRAPHIC SOURCE(S)

New York State Department of Health. Prevention of secondary disease: immunizations. New York (NY): New York State Department of Health; 2006 Dec. 7 p. [17 references]

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

- Human immunodeficiency virus (HIV) infection
- Tetanus
- Diphtheria
- Pertussis
- Influenza
- Pneumococcal infection
- Hepatitis A and B
- Measles
- Mumps
- Rubella
- Human papillomavirus (HPV) infection
- Varicella

GUIDELINE CATEGORY

Prevention

CLINICAL SPECIALTY

Allergy and Immunology
Family Practice
Infectious Diseases
Internal Medicine
Obstetrics and Gynecology
Preventive Medicine

INTENDED USERS

Advanced Practice Nurses
Health Care Providers
Nurses
Physician Assistants
Physicians
Public Health Departments

GUIDELINE OBJECTIVE(S)

To provide guidelines for immunization of human immunodeficiency virus (HIV)-infected patients to prevent secondary diseases

TARGET POPULATION

Human immunodeficiency virus (HIV)-infected adults including pregnant women

INTERVENTIONS AND PRACTICES CONSIDERED

Immunization with the following vaccines:

1. Tetanus, Diphtheria, and Pertussis (Tdap), or Tetanus-Diphtheria (Td) vaccine
2. Influenza vaccine
3. Pneumococcal polysaccharide vaccine
4. Hepatitis A and B vaccine
5. Measles, Mumps, Rubella (MMR) vaccine
6. Human papillomavirus vaccine
7. Varicella vaccine

MAJOR OUTCOMES CONSIDERED

Risks, benefits, and efficacy of immunizations

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus (Committee)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

AIDS Institute clinical guidelines are developed by distinguished committees of clinicians and others with extensive experience providing care to people with HIV infection. Committees* meet regularly to assess current recommendations and to write and update guidelines in accordance with newly emerging clinical and research developments.

The Committees* rely on evidence to the extent possible in formulating recommendations. When data from randomized clinical trials are not available, Committees rely on developing guidelines based on consensus, balancing the use of new information with sound clinical judgment that results in recommendations that are in the best interest of patients.

* Current committees include:

- Medical Care Criteria Committee
- Committee for the Care of Children and Adolescents with HIV Infection
- Dental Standards of Care Committee
- Mental Health Committee
- Women's Health Committee
- Substance Use Committee
- Physician's Prevention Advisory Committee
- Pharmacy Committee

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

All guidelines developed by the Committee are externally peer reviewed by at least two experts in that particular area of patient care, which ensures depth and quality of the guidelines.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Immunizations

Recommended Immunizations for Non-Pregnant Human Immunodeficiency Virus (HIV)-Infected Adults

Table 1 Recommended Immunizations for Non-Pregnant HIV-Infected Adults

Vaccine	Indications	Schedule
Tetanus, Diphtheria, and Pertussis (Tdap),* and	For patients who have not received the primary series	Administer 1 dose of Tdap, followed by a dose of Td at 1 month and a second dose of Td 6–12 months later

Vaccine	Indications	Schedule
Tetanus-Diphtheria (Td)*	For patients who have already received the primary series	Administer 1 dose of Tdap booster every 10 years
Influenza	For all patients	Administer 1 annual dose. Do not use FluMist because it contains live virus.
Pneumococcal polysaccharide	For all patients	Administer 1 dose followed by one revaccination after 5 to 6 years (or more) have elapsed since initial vaccination
Hepatitis A*	For patients at increased risk for hepatitis A	Administer 2 doses (0 and 6–12 months)
Hepatitis B*	For patients without serologic evidence of prior hepatitis B virus (HBV) infection or who have not previously received the complete series of HBV vaccination	Strongly encourage the vaccine series—3 doses (0, 1 to 2, and 6 months)
Measles, Mumps, Rubella (MMR)*	For all asymptomatic HIV-infected patients who do not have evidence of severe immunosuppression and who are seronegative for antibody to MMR	Administer 1 dose
	For patients with severe immunosuppression (<200 cells/mm^3)	Do not administer vaccine
Human Papillomavirus (HPV)	For women between the ages of 9 and 26 years	Administer 3 doses (at 0, 2, and 6 months)
Varicella*	For persons who are susceptible	Consider administering 2 doses (at 0 and 4–8 weeks)

For other vaccines, see Centers for Disease Control and Prevention (CDC) recommendations. Available at: >http://www.cdc.gov/vaccines/
*Covered by the Vaccine Injury Compensation Program

Refer to the original guideline document for more information on the recommended vaccines.

Recommended Immunizations for Pregnant HIV-Infected Adults

Routine pregnancy testing of women of childbearing age before administering a live-virus vaccine is not recommended (Centers for Disease Control and Prevention [CDC], 1998).

Clinicians should avoid administering immunizations late in the third trimester to avoid the theoretical possibility of the vaccines causing increased viral load levels at the time of delivery.

Because of the importance of protecting women of childbearing age against rubella, clinicians should adopt the following practices in any immunization program:

- Ask women if they are or could be pregnant or intend to become pregnant within the next 4 weeks
- Explain the potential risk of vaccination to the fetus to women who state that they are not pregnant
- Counsel women who are vaccinated to avoid pregnancy during the 4 weeks after Measles, Mumps, Rubella (MMR) vaccination (CDC, 1998; "Control and prevention of rubella," 2001; CDC, "Revised ACIP recommendation," 2001).
- Do not vaccinate women who state that they are pregnant; administer rubella vaccine immediately after delivery in rubella-susceptible HIV-infected women with CD4 counts >200 cells/mm^3
- Test pregnant women for rubella immunity at the first antepartum visit

Clinicians should counsel pregnant women who are inadvertently vaccinated or who become pregnant within 4 weeks after MMR or varicella vaccination about the theoretical risk to the fetus; however, exposure to MMR or varicella vaccines during pregnancy generally is not a reason to terminate a pregnancy (CDC, 1998; "Prevention of varicella," 1996).

Table 2 Recommended Immunizations for Pregnant HIV-Infected Adults

Vaccine	Indications	Recommendations
Tetanus	For women who have not received Td vaccination in last 10 years but have been previously immunized	Administer Td booster
	For women who have never been immunized or have	Administer the complete primary series, including Tdap (see Table

Vaccine	Indications	Recommendations
	only been partially immunized	1 above)
	For women for whom the vaccine is indicated but who do not receive the complete 3-dose series during pregnancy	Follow up after delivery to ensure that the series is completed
Influenza	For all pregnant women	Administer vaccine during influenza season, regardless of stage of pregnancy
Hepatitis A	For pregnant women at increased risk for hepatitis A*	Offer hepatitis A vaccine series
Hepatitis B	For all pregnant women who are hepatitis B surface antigen (HBsAg), hepatitis B surface antibody (HBsAb), and hepatitis B core antibody (HBcAb) immunoglobulin G (IgG) negative	Administer hepatitis B vaccine
	For pregnant women who are HBsAg-positive	Ensure that 1) the infant receives HBIG and that the hepatitis B vaccine series is initiated within 12 hours after birth, and 2) the recommended hepatitis B vaccine series is completed in the infant
Pneumococcal polysaccharide	For pregnant women who have not received the vaccine within the last 6 years	Administer vaccine
Measles, Mumps, Rubella (MMR)	For pregnant women or women intending to become pregnant in the next 4 weeks	Do not administer vaccine
	For pregnant women who	Administer vaccine immediately

Vaccine	Indications	Recommendations
	are rubella-susceptible	after delivery
	For household contacts of pregnant women	Administer vaccine when indicated
Varicella	For all pregnant women	Do not administer vaccine
	For household contacts of pregnant women	Administer vaccine when indicated
	For women who are exposed to varicella at any point during pregnancy with no history of previous varicella	Perform antibody testing for previous varicella exposure. If exposure is negative, administer varicella zoster immune globulin (VZIG)

(CDC, 1998; CDC, "Control and prevention of rubella," 2001; CDC, "Revised ACIP recommendation," 2001; CDC, 1996; Shields et al., 2001; "Diphtheria, tetanus, and pertussis," 1991; Bridges et al., 2001; Neuzil et al., 1998; "Hepatitis B virus," 1991)

*Persons with chronic liver disease (e.g. hepatitis B or C); travelers to countries with high endemicity of infection; persons who live in a community experiencing an outbreak of hepatitis A virus (HAV) infection; illicit drug users, particularly injection drug users; persons who have clotting-factor disorders; persons at occupational risk for infection.

Notes
Influenza: It has been shown that women in the second and third trimesters of pregnancy are at an increased risk for hospitalization from influenza.
Hepatitis A and B: No known risk exists for the fetus from passive immunization of pregnant women with immune globulin preparations.
MMR: Persons who receive MMR vaccine do not transmit the vaccine viruses to contacts (CDC, 1998).
Varicella: Transmission of varicella vaccine virus to contacts is rare (CDC, 1996).

Concurrent Administration of Antimicrobial Agents and Vaccines

Clinicians should discontinue antiviral drugs active against herpesviruses ≥24 hours before administration of varicella vaccine.

Vaccines and Allergens

Before administering the influenza vaccine, clinicians should ask patients whether they are able to eat eggs without adverse effects. Clinicians should not administer the influenza vaccine to patients who have a history of anaphylactic or anaphylactic-like allergy to eggs.

Clinicians should use extreme caution when administering vaccines that contain gelatin to persons who have a history of anaphylactic reaction to gelatin or gelatin-containing products.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

References open in a new window

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate immunization of human immunodeficiency virus (HIV)-infected patients resulting in prevention of secondary disease

POTENTIAL HARMS

- The rare serious allergic reaction after measles or mumps vaccination or measles, mumps, and rubella (MMR) is not believed to be caused by egg antigens, but by other components of the vaccine (e.g., gelatin). Extreme caution should be exercised when administering vaccines that contain gelatin to persons who have a history of an anaphylactic reaction to gelatin or gelatin-containing products. Before administering gelatin-containing vaccines to such persons, skin testing for sensitivity to gelatin can be considered.
- Antiviral drugs active against herpes viruses (e.g., acyclovir or valacyclovir) might reduce the efficacy of live attenuated varicella vaccine. These drugs should be discontinued ≥24 hours before administration of varicella vaccine, if possible.

CONTRAINDICATIONS

CONTRAINDICATIONS

- Pregnancy is a contraindication for measles, mumps, rubella, and varicella vaccines.
- Clinicians should not administer the influenza vaccine to patients who have a history of anaphylactic or anaphylactic-like allergy to eggs.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

The AIDS Institute's Office of the Medical Director directly oversees the development, publication, dissemination and implementation of clinical practice guidelines, in collaboration with The Johns Hopkins University, Division of Infectious Diseases. These guidelines address the medical management of adults, adolescents and children with HIV infection; primary and secondary prevention in medical settings; and include informational brochures for care providers and the public.

The HIV Clinical Guidelines Program works with other programs in the AIDS Institute to promote adoption of guidelines. Clinicians, for example, are targeted through the Clinical Education Initiative (CEI) and the AIDS Education and Training Centers (AETC). The CEI provides tailored educational programming on site for health care providers on important topics in HIV care, including those addressed by the HIV Clinical Guidelines Program. The AETC provides conferences, grand rounds and other programs that cover topics contained in AIDS Institute guidelines.

Support service providers are targeted through the HIV Education and Training initiative which provides training on important HIV topics to non-physician health and human services providers. Education is carried out across the State as well as through video conferencing and audio conferencing.

The HIV Clinical Guidelines Program also works in a coordinated manner with the HIV Quality of Care Program to promote implementation of HIV guidelines in New York State. By developing quality indicators based on the guidelines, the AIDS Institute has created a mechanism for measurement of performance that allows providers and consumers to know to what extent specific guidelines have been implemented.

Finally, best practices booklets are developed through the HIV Clinical Guidelines Program. These contain practical solutions to common problems related to access, delivery or coordination of care, in an effort to ensure that HIV guidelines are implemented and that patients receive the highest level of HIV care possible.

IMPLEMENTATION TOOLS

Personal Digital Assistant (PDA) Downloads

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness
Staying Healthy

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

New York State Department of Health. Prevention of secondary disease: immunizations. New York (NY): New York State Department of Health; 2006 Dec. 7 p. [17 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2006 Dec

GUIDELINE DEVELOPER(S)

New York State Department of Health - State/Local Government Agency [U.S.]

SOURCE(S) OF FUNDING

New York State Department of Health

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available from the New York State Department of Health AIDS Institute Web site.

AVAILABILITY OF COMPANION DOCUMENTS

This guideline is available as a Personal Digital Assistant (PDA) download from the New York State Department of Health AIDS Institute Web site.

PATIENT RESOURCES

None available

NGC STATUS

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